

Polypharmacy

- *The single most important predictor* of adverse drug events (ADEs) is the number of drugs being prescribed to a patient.
- Polypharmacy is defined as the simultaneous use of 5 or more medications by a single individual.
- Polypharmacy leads to 2/3 of older adult visits to emergency rooms. It increases likelihood of nursing home (NH) placement, poor level of function, higher mortality, and higher hospitalization rates.

The Classic Signs of Polypharmacy Include:

1. Cognitive impairment
2. Tiredness
3. Sleepiness
4. Decreased alertness
5. Constipation
6. Diarrhea or incontinence
7. Loss of appetite
8. confusion
9. Falls
10. Depression or lack of interest in usual activities
11. Weakness
12. Tremors
13. Visual or auditory hallucinations
14. Anxiety or excitability and/or dizziness.

Trends

- 20% of drugs prescribed to older adults are inappropriate.
- This increases to 33% for NH patients and 50% for NH patients with dementia
- 15% of older adults experience ADE's.
- 25% of all prescription medications are used by seniors for pain, insomnia, and anxiety.
- Adverse drug events increase by 50% when a patient goes from taking 5 medications to six. After that the risk increases exponentially.
- Approximately 2 million ADEs every year accounting for about 100,000 deaths.
- **95% of ADE's are predictable and 50% are preventable.**

Drugs and Older Adults

- Long term use of benzodiazepines cause tachyphylaxis, a diminished drug response leading to persistent/increased sleep disturbance. Long term use is also associated with alterations in cognitive function, falls, and hip fractures.

- Most meds for psychotic disorders antagonize the dopamine type 2 receptor which causes a higher risk of tardive dyskinesia (TD) and extrapyramidal symptoms (EPS) and are associated with metabolic syndrome.
- **All meds that antagonize the D2 receptor increase the risk of stroke. These meds are also associated with cognitive decline in demented patients.** Consequently, long acting injectable versions should be reserved only for chronic psychotic patients with demonstrated non-compliance, but not be used for demented patients with behavioral disturbances.
- Classes of prescribed meds that contribute to cognitive impairment include opiates, benzodiazepines, anticholinergics, antihistamines, and sedative-hypnotics. These should always be minimized or eliminated.
- There are pharmacokinetic and pharmacodynamic changes in the bodies of aging adults. Muscle mass decreases, peripheral fat stores increase, causing some drugs to remain in the body longer.
- Decreased renal clearance and hepatic blood flow combine to slow the clearance of drugs. This can result in greater therapeutic and adverse effects at lower doses than expected.
- Older adults should be started at 25%-50% of the starting dose and 50%-75% of the effective dose that a younger person requires.
- Side effects are the most common cause of reversible cognitive impairment in older adults.

Questions Patients and Advocates Should Always Ask:

1. What is the medication for?
2. How long should I take it?
3. Is this similar to a drug I already take?
4. Can non-drug alternatives help me?
5. Will this medication interact dangerously with other prescription meds I take?
6. What side effects will this cause?

References

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